REMARKS

Claims 16-22 were pending. With the instant amendment, Claim 16 has been amended. Claim 17 has been canceled without prejudice to Applicants' right to pursue the subject matter of the canceled claim in subsequent filings. Claim 23 has been added. After entry of the instant amendment, Claims 16 and 18-23 are pending and under consideration. Applicants are concurrently filing a Request for Continued Examination, accompanied by the required fee.

I. AMENDMENTS TO THE CLAIMS

Claim 16 has been amended to recite a method for treating drug abuse in an individual in need of such treatment comprising administering to the individual an agent that inhibits the phosphorylation of Thr75-DARPP-32. Support for this amendment can be found, for example, in the specification at page 10, lines 11-14 and 23-25, pages 51-56, and claims 16 and 17 as originally filed.

New independent Claim 23 has been added. This new claim is presented in the instant amendment to incorporate elements of dependent Claim 22 along with those of base Claims 16 (prior to the instant amendment) and 19. Since the Patent Office neither objected to, nor rejected, the subject matter of Claim 22 in the previous Office Action, Applicants respectfully submit that Claim 23 should be allowable.

As the instant amendment is fully supported by the specification and claims as originally filed, consequently the instant amendment does not constitute new matter. Applicants therefore request entry of the amendment into the record.

II. CLAIM REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 16-21 stand rejected under 35 U.S.C. § 112, first paragraph, for allegedly containing subject matter which is not described in the specification as to enable one of skill to make or use the invention. Applicants respectfully submit that the cancellation of Claim 17 renders the rejection moot as to Claim 17. Applicants respectfully submit that the rejection of Claims 16 and 18-21 under 35 U.S.C. § 112, first paragraph, should be withdrawn, as discussed below.

Without acquiescing to the propriety of the Patent Office's rejection, and solely in order to expedite prosecution and allowance of the claims, Applicants have: 1) amended independent Claim 16 to recite a method for treating drug abuse in an individual in need of such treatment, comprising: administering to the individual an agent that inhibits the phosphorylation of Thr75-DARP-32, and 2) have canceled Claim 17. Applicants respectfully submit this amendment to the claims overcomes the rejection of Claim 16 and dependent Claims 18-22 under 35 U.S.C. §112, first paragraph.

With respect to Jaber *et al.* (Ref. V), Applicants respectfully submit that the Patent Office has misapprehended a statement in Jaber *et al.* at p. 1506, cautioning that the interpretation of data obtained from cultured cells in which heterologous dopamine receptors are expressed may not be relevant to *in vivo* dopamine signaling pathways. The Patent Office suggested that this statement was inconsistent with statements in the Declaration of Dr. Fienberg, paragraphs 14 & 15 (submitted September 30, 2002, and entered into the record) asserting that the *in vitro* brain slice model was an art-accepted assay that correlates with results observed *in vivo*, as evidenced by the references cites therein. *See* Paper No. 10, p. 4; Office Action dated December 18, 2002, Paper No. 18, p.4 (apparently referring to the "author of the in *Science* article" by mistake where reference to Jaber *et al.* was intended). First, the brain slice model, as used in the present application, does not merely utilize standard cell cultures. Rather, the brain slice model uses cellular structures taken directly from the animal that much more closely resemble *in vivo* physiological brain structures. Second, the brain slice model does not, in fact, depend upon the heterologous expression of dopamine receptors for the analysis of dopaminergic-regulated signaling pathways, since the brain slice is taken directly from the animal. Thus, the caution in Jaber *et al.* (Ref. V) is inapplicable to the brain slice model and there is no inconsistency between the statements of Dr. Fienberg in his declaration and statements in the literature referred to by the Patent Office.

Applicants respectfully submit that whether or not the rodent models described in Example 2, pp. 61-68, of the specification (ΔFosB-inducible transgenic mice and chronic cocaine-administered rats as studied by both behavioral and brain slice methods) are general models for any dopamine dsyregulation is moot in view of the amendment to the claims. However, the rodent models described in Example 2 of the specification were, at the time of invention, certainly models for drug abuse as supported by literature already of record (see, *e.g.*, Hiroi *et al.*, 1999, *European J. Neurosci.* 11: 1114-18, Ref. DB of record; Masserano *et al.*, 1993, *J. Pharmacol. Exp. Ther.* 270: 133-41, Ref. DC of record).

For the reasons given above, Applicants respectfully submit that Claims 16 and 18-21 are fully enabled by the specification. Accordingly, Applicants respectfully request the withdrawal of the rejection of Claim 16 and 18-21 under 35 U.S.C. § 112, first paragraph.

CONCLUSION

In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney if a telephone call could help resolve any remaining items.

No fees, other than those in connection with the Petition For Extension of Time and with the Request For Continued Examination, are believed to be due with this response. However, the Commissioner is authorized to charge any required fee, or credit any overpayment, to Pennie & Edmonds$_{LLP}$ U.S. Deposit Account No. 16-1150 (order no. 11181-013-999).

Respectfully submitted,

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